

WHAT IS CLAIMED IS:

1. A translatable actuator unit comprising:

a translatable actuator module that moves an object
5 straightly;

a force sensor that detects a load applied to the
translatable actuator module; and

a servo control module that controls a speed, a
position and/or output power of the translatable actuator
10 module,

wherein the translatable actuator module, the force
sensor and the servo control module are integrally
configured,

the servo control module has
15 two-way network means for receiving a control command
concerning the speed, the position and/or the output power
from a network, and transmitting information of the speed,
the position and/or the output power to the network,

control means for controlling the speed, the position
20 and/or the output power, and

self-diagnosis means for confirming safety and
detecting an abnormal state based on detected information of
the speed, the position, the load, and/or an electric
current of the translatable actuator module.

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2. The translatable actuator unit according to claim 1,

the translatable actuator module comprising:

a driving motor;

a mechanism for converting rotational movement of the driving motor into translatable movement of the translatable

5 actuator module; and

an encoder that detects a rotational speed and/or a rotational angle of the driving motor.

3. The translatable actuator unit according to claim 1,
10 wherein the force sensor comprises an elastic supporting member that elastically supports the translatable actuator module at an opposite side to the object, and a displacement detector that detects displacement of the elastic supporting member.

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4. The translatable actuator unit according to claim 1, wherein the servo control module comprises:

a communication unit connectable to the network; a memory device that stores the control command from the

20 network and stores an operation program;

a microprocessor that controls the translatable actuator module based on the operation program, confirms safety and detects an abnormal state based on the detected information of the speed, the position, the load, and/or the
25 electric current;

an interface that converts a signal communicated

between the microprocessor and the translatable actuator module and between the microprocessor and the force sensor; and

5 a motor driver that converts a control signal from the microprocessor into a driving signal for the translatable actuator module.

5. Care equipment comprising a translatable actuator unit that includes a translatable actuator module that moves
10 an object straightly;

a force sensor that detects a load applied to the translatable actuator module; and

a servo control module that controls a speed, a position and/or output power of the translatable actuator
15 module,

wherein the translatable actuator module, the force sensor and the servo control module are integrally configured,

the servo control module has
20 two-way network means for receiving a control command concerning the speed, the position and/or the output power from a network, and transmitting information of the speed, the position and/or the output power to the network,

control means for controlling the speed, the position
25 and/or the output power, and

self-diagnosis means for confirming safety and

detecting an abnormal state based on detected information of the speed, the position, the load, and/or an electric current of the translatory actuator module.